

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA)	
)	
Plaintiff,)	
)	Civil Action No. 05-6656
v.)	
)	
MFS, INC. (a/k/a MINERAL)	
FIBER SPECIALISTS))	
)	
Defendant.)	
_____)	

CONSENT DECREE

WHEREAS, Plaintiff, the United States of America ("United States"), by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), has filed a complaint against Defendant MFS, Inc. a/k/a Mineral Fiber Specialists (hereinafter referred to as "MFS" or "Defendant") seeking injunctive relief and civil penalties pursuant to Section 113(b) of the Clean Air Act, as amended ("CAA"), 42 U.S.C. § 7413(b), for alleged violations by Defendant of Section 112 of the CAA, 42 U.S.C. § 7412, and the applicable requirements of 40 C.F.R. Part 63, Subpart DDD.

WHEREAS, the Defendant owns and operates a mineral wool production plant ("Facility") in the City of Bethlehem, Northampton County, Pennsylvania and is therefore subject to National Emission Standards for Hazardous Air Pollutants ("NESHAP") for mineral wool manufacturers codified at 40 C.F.R. Part 63, Subpart DDD ("Mineral Wool or MW NESHAP"), specifically §§ 63.1175 - 63.1196.

WHEREAS, the United States alleges that Defendant has violated and continues to violate Section 112 of the CAA, 42 U.S.C. § 7412, and the applicable requirements of 40 C.F.R. Part 63, Subpart DDD including but not limited to the requirements set forth in 40 C.F.R.

§§ 63.1178(a)(1), 63.1180(a)(2), and 63.1193(a);

WHEREAS, Defendant denies the allegations set forth in the complaint;

WHEREAS, the Parties have negotiated in good faith and without an admission of liability have reached a settlement of the issues raised in the complaint;

WHEREAS, the Parties agree, and the Court finds, that settlement of the claims alleged in the complaint without further litigation or trial of any issues is fair, reasonable and in the public interest and that the entry of this Consent Decree is the most appropriate way of resolving the claims alleged in the complaint.

NOW THEREFORE, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the Parties to this action pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1331, 1345 and 1355. The complaint states claims upon which relief may be granted against the Defendant for injunctive relief and civil penalties under Section 113(b) of the "CAA", 42 U.S.C. § 7413(b). Venue is proper in this judicial district, pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and 28 U.S.C. § 1391(b), because Defendant is doing business in this district and because the violations alleged herein occurred in this judicial district. Defendant waives any and all objections or defenses that it might have to the Court's jurisdiction to enter and enforce this Consent Decree or to venue in this District.

II. BINDING EFFECT

2. The provisions of this Consent Decree shall apply to and be binding on the United States and on Defendant MFS, Inc., its agents, successors, and assigns.

3. Within thirty (30) days from the Date of Entry of this Consent Decree and until its termination, Defendant shall give written notice of and provide a copy of this Consent Decree

to any person or entity to whom Defendant may transfer ownership or operation of any portion of its mineral wool manufacturing facility ("Facility"), in accordance with the "Transfer of Ownership or Operational Control" provisions of Defendant's Title V State Operating permit. Defendant shall notify EPA, the Pennsylvania Department of Environmental Protection ("PADEP") and the United States Department of Justice in writing of any successor in interest at least twenty-one (21) days prior to any such transfer. No transfer of ownership or operation of the Facility shall relieve Defendant from liability for any violation of this Consent Decree prior to the date of such transfer. MFS shall condition the transfer of ownership or operation of the Facility upon the execution by the transferee of a modification to the Consent Decree, which makes the terms and conditions of the Decree that apply to MFS apply to the transferee. MFS shall remain liable for any and all assessed civil penalties and stipulated penalties that are assessed prior to the effective date of the transfer. Until MFS has paid any and all outstanding civil and/or stipulated penalties, MFS shall remain subject to the jurisdiction of the Court for such payment as provided in this Decree.

4. Unless and until such date that Defendant transfers the Facility Defendant shall be solely responsible for ensuring that performance of the work contemplated under this Consent Decree is undertaken in accordance with the deadlines and requirements contained in this Consent Decree, and any exhibits hereto. Any action taken by any contractor or consultant retained to implement Defendant's duties under this Consent Decree shall be considered an action of Defendant for purposes of determining compliance with this Consent Decree. In an action to enforce this Consent Decree, Defendant shall not assert as a defense against the United States or EPA any act or failure to act by any of its officers, managers, employees, agents, contractors, successors and assigns; however, this Consent Decree shall not limit Defendant's right to take all appropriate action against any person or entity that causes or contributes to Defendant's failure to perform.

III. PURPOSE

5. The express purpose of the Parties entering into this Consent Decree is to further the objectives of the Clean Air Act and the regulations promulgated thereunder, to ensure Defendant's compliance with the requirements of the mineral wool NESHAP at this Facility including the opportunity for Defendant to ascertain compliance using the Alternative Test Method as provided in this Decree below, and as further described in Appendix A to this Decree.

IV. DEFINITIONS

6. Unless otherwise defined herein, the terms used in this Consent Decree will have the meaning given to those terms in the Clean Air Act, 42 U.S.C. §§ 7401 to 7671q and the regulations promulgated thereunder. Any other words shall be given their ordinary meaning.

The following terms used in this Consent Decree, its appendices, and studies and plans submitted by Defendant and approved by EPA are defined as follows:

"Alternative Test Method" means any method of sampling and analyzing for an air pollutant that is not a test method already validated by EPA in Title 40 of the Code of Federal Regulations, and that has been demonstrated to the EPA Administrator's satisfaction, using Method 301 in Appendix A of 40 C.F.R. Part 63 ("Test Methods"), to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in Part 63.

"Charging the cupola" shall mean that the Facility cupolas are heated and charged with slag as part of the process to produce mineral wool.

"Consent Decree" or "Decree" shall mean this Consent Decree, including any and all appendices attached to the Consent Decree.

"Construction Completion" of a construction project under Paragraphs 19 and 21 shall mean the point in time the new, modified, or rehabilitated facilities are functioning.

"Date of Entry" or "Entry Date" shall mean the date on which the Consent Decree is

approved and entered by the United States District Court for the Eastern District of Pennsylvania.

"Date of Lodging" shall mean the date on which the Consent Decree is lodged with the United States District Court for the Eastern District of Pennsylvania.

"Day" or "days" shall mean a calendar day or calendar days. When the day a report or other deliverable is due under this Consent Decree falls on a Saturday, Sunday or any Federal legal holiday, Defendant shall have until the next calendar day that is not one of the aforementioned days for submittal of such report or other deliverable.

"Parties" shall mean the United States of America and Defendant MFS Inc.

"PM" shall mean particulate matter.

"PM Emissions Limits" shall means PM limits for each existing, new, or reconstructed cupola as specified in 40 C.F.R. § 63.1178.

"Performance test" means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

"Permit" shall mean the Commonwealth of Pennsylvania, Department of Environmental Protection Title V State Operating Permit.

"Fabric filter" means an air pollution control device used to capture particulate matter by filtering gas streams through fabric bags. It also is known as a baghouse.

"Facility" shall mean the mineral wool production plant located at Easton Road, Rural Route 5, Box 5151, Bethlehem, Pennsylvania.

"Cupola" shall mean a large, water-cooled metal vessel to which is charged a mixture of fuel, rock and/or slag, and additives. As the fuel is burned, the charged mixture is heated to a molten state for later processing to form mineral wool.

"Mineral Wool" shall mean the fibrous glassy substance made from natural rock (such as basalt), blast furnace slag or other slag, or a mixture of rock and slag. It may be used as a thermal or acoustical insulation material or in the making of other products to provide structural

strength, sound absorbency, fire resistance, or other required properties.

“Shutdown” shall mean the cessation of operation of an affected facility for any purpose.

“Startup” shall mean the setting in operation of equipment for any purpose as provided in 40 C.F.R. § 63.2 with the exception that for purposes of this Decree that Defendant shall be allowed to perform necessary maintenance and repairs in preparation for charging the Facility cupolas with slag.

“United States” shall mean the United States of America, acting on behalf of EPA.

V. REMEDIAL MEASURES

A. General Duties

7. **Duty to Comply.** At all times Defendant shall comply with all terms, conditions and requirements of this Consent Decree, permit and the MW NESHAP as provided in this Decree.

8. **Operation and Maintenance of the Facility.** Defendant shall at all times maintain in good working order and properly operate the Facility to comply with the MW NESHAP as provided in this Consent Decree.

B. Specific Measures

9. **Process Control Testing Using Alternative Test Method.** Defendant has notified EPA and has proposed an alternative test method, included in this Decree as Appendix A, to ascertain compliance with the MW NESHAP at its Bethlehem Facility.

10. Defendant may perform necessary maintenance, repairs and preparation start up activities at its Bethlehem Facility in preparation to conduct the validation testing of its alternative test method using Method 301 in Appendix A, and conduct an initial performance test to establish PM emission levels of its cupolas at the Facility.

11. The validation testing will be conducted on the alternative test method found in Appendix A to this Decree, in order to determine the precision of estimating the relative

contributions or proportions of cupola ash versus fibers from the spinners, in the total particulate matter. Any negative bias ascertained during the validation testing must be factored into the final compliance result.

12. The initial performance test will be conducted, using the alternative test method found in Appendix A, to demonstrate compliance with the PM emission limitations set forth in 40 C.F.R. § 63.1178.

13. Defendant will provide notification(s) to EPA prior to start up of its Facility and prior to charging the Facility cupolas with slag. The notification(s) will provide the specific date respectively that Defendant will start up the Facility, and the date by which the Facility will charge the cupolas. Defendant may provide the notification for charging the cupolas separately from the start up notification.

14. Defendant shall conduct both the validation testing and the initial performance test no later than one hundred and twenty (120) calendar days from the date contained in the notification of when the Facility charges the cupolas as provided in paragraph 13 of this Decree.

15. Defendant shall provide written notification to EPA at least 15 days prior to its proposed date for conducting the validation testing of its proposed alternative test method, and the initial performance test as described in paragraphs 11 and 12. Authorized representatives of U.S. EPA, including contractors, shall have access to plant premises to observe validation and initial performance testing. This paragraph in no way limits any other right of entry of Plaintiff to Defendant's Facility.

16. Within ninety (90) days after the date Defendant completes the validation testing and the initial performance test as provided in Paragraph 14 of this Decree, Defendant shall submit the results of the validation and initial performance tests to EPA for review.

17. EPA shall review the validation testing results to ascertain accuracy in determining the estimation factor used to establish Defendant's final compliance result. EPA will also review Defendant's final compliance result. Based upon this review of the validation

testing results EPA will either approve or disapprove of the alternative test method found in Appendix A.

18. If EPA disapproves the alternative test method based on the results of the validation test results, EPA will specify the deficiencies in writing. All review and approval will be governed by the review and approval procedures found below in Section VIII of this Consent Decree.

19. Any on-going disputes regarding disapproval of the alternative test method shall be handled pursuant to the dispute resolution procedures found in Section XII of this Consent Decree.

20. If EPA approves the alternative test method found in Appendix A based on the validation test results, EPA will then review the initial alternative test performance results to determine compliance with the PM emission limitations set forth in 40 C.F.R. § 63.1178. EPA shall provide written notice of that compliance determination to Defendant.

21. If the initial performance test demonstrates compliance with the PM emission limits set forth in 40 C.F.R. § 63.1178, Defendant shall thereafter comply with all record-keeping and reporting requirements pursuant to 40 C.F.R. §§ 63.1192 and 63.1193.

22. If EPA determines that the initial performance test results fail to demonstrate compliance with the emission limitations set forth in 40 C.F.R. § 63.1178, Defendant shall submit a plan ("Compliance Plan") to EPA which describes those measures Defendant shall undertake to achieve compliance with the mineral wool NESHAP, which may include but are not limited to upgrading or replacing the existing control device, along with an implementation schedule for the commencement and completion of each significant construction and/or facility improvement milestone.

23. Defendant shall submit the Compliance Plan along with the implementation schedule to EPA within 30 days after EPA provides written notice that Defendant's Facility has not complied with the PM emission limits set forth in 40 C.F.R. § 63.1178.

24. EPA will review the required Compliance Plan and implementation schedule and notify Defendant of EPA's acceptance or rejection of the Compliance Plan and schedule.

25. In the event that EPA disapproves all or part of the Compliance Plan and implementation schedule, EPA will specify the deficiencies in writing. Within 30 days of receipt of EPA written disapproval, Defendant shall amend and submit to EPA a revised submission that responds to and addresses the specified deficiencies.

26. In the event of subsequent disapproval of the revised submission, EPA retains the right to require any modifications necessary for Defendant to comply with the mineral wool NESHAP.

27. For any new construction required by the approved Compliance Plan because Defendant fails to demonstrate compliance with the mineral wool NESHAP, the Defendant shall complete construction in accordance with the implementation schedule set forth in the approved Plan for any new construction to comply with the mineral wool NESHAP requirements.

28. In any Compliance Plan required by Paragraph 23 Defendant may elect to achieve compliance by ceasing to operate the Facility. If Defendant so elects and thereafter wishes to restart the Facility, Defendant shall conduct another performance test and otherwise fulfill the requirements of Section V. B in this Consent Decree.

29. The Defendant shall construct and implement Facility improvements in accordance with the schedule set forth as part of the approved Plan.

VI. REPORTING REQUIREMENTS

30. Beginning with the first full calendar quarter after the Date of Entry of the Consent Decree, Defendant shall submit to EPA within thirty (30) days after the end of each calendar quarter until termination of this Consent Decree a Calendar Quarterly Progress Report ("Calendar Quarterly Report"). This Calendar Quarterly Report shall contain, the following:

(a) Progress reports on the implementation of the requirements of Section V

(Remedial Measures) as described in Paragraphs 7 through 29 above.

(b) A description of any problems anticipated with respect to meeting the requirements of Section V (Remedial Measures) of this Consent Decree and actions taken or to be taken to resolve such problems; and

(c) Any such additional matters as Defendant believes should be brought to the attention of EPA.

(d) The Calendar Quarterly Report shall be certified, consistent with the requirements of 40 C.F.R. § 63.1193, by the person responsible for compliance or by a person responsible for overseeing implementation of this Consent Decree, which shall state:

“I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.”

VII. RIGHT OF ENTRY

31. (a) EPA and its authorized representatives and contractors, shall each have authority at all reasonable times, upon the presentation of credentials, to enter the property of Defendant to monitor the progress of activities required by this Consent Decree, including;

1. Verify any data or information submitted to the United States.
2. Obtain samples;
3. Observe performance tests;
4. Inspect and evaluate any portion of the Facility; and
5. Review and copy any record required to be kept under the terms and conditions of this Consent Decree.

(b) Upon request, Defendant shall provide EPA or its authorized representatives splits of all samples collected by Defendant or its consultants and contractors. Upon request,

EPA shall provide Defendant splits of any samples collected by EPA.

(c) These inspection rights are in addition to, and in no way limit or otherwise affect, EPA's statutory authorities to conduct inspections, to require monitoring and to obtain information from Defendant as authorized by law.

VIII. REVIEW AND APPROVAL PROCEDURES

32. (a) After receipt and review of any compliance plan or any other plan, program or other document which is required to be submitted for approval pursuant to this Consent Decree, EPA may (1) approve, in whole or in part, the submission; (2) approve the complete submission or portions of the submission upon specified conditions; (3) disapprove the submission, in whole or in part, and direct that Defendant modify the submission as described further in Paragraph 34 below; or (4) any combination of the above.

(b) In the event of approval of the complete submission, Defendant shall proceed to take any actions required by the plan, program or other approved document, as approved by EPA as further described below in Paragraph 36.

(c) In the event of approval of portions of the submission or approval upon specified conditions, Defendant shall proceed to take the actions identified in the non-deficient portion of the plan, program, other document, or portion thereof, in accordance with any applicable conditions specified by EPA, subject only to Defendant's right to invoke the Dispute Resolution procedures set forth in Section XII with respect to the conditions imposed. Implementation of any non-deficient portion of the submission shall not eliminate the potential of Defendant to incur stipulated penalties pursuant to Section X.

33. Upon receipt of a notice of disapproval of all or part of a submission from EPA, Defendant shall, within thirty (30) days (or such greater time frame as specified by EPA in writing), modify the plan as necessary to comply with the mineral wool NESHAP and resubmit the plan, program or other document for EPA approval, subject only to Defendant's right to

invoke the Dispute Resolution procedures set forth in Section XII. Any stipulated penalties applicable to the submission, as provided in Section X, shall accrue during the 30-day period (or any extended time as is provided herein), but shall not be payable unless the resubmission is disapproved due to a defect as provided in Paragraph 34.

34. In the event that a resubmitted plan, program or other document, or portion thereof, is disapproved by EPA, Defendant shall again modify the plan as necessary to comply with the mineral wool NESHAP as provided in Paragraph 33, or EPA may modify the submission. Unless Defendant invokes the Dispute Resolution Procedures set forth in Section XII, and the disapproval by EPA of the Defendant's resubmission is overturned pursuant to that Section, Defendant shall be deemed to have failed to submit such program, plan or other document timely and adequately, and stipulated penalties shall accrue for such violation from the date when Defendant is obligated to have amended the document to cure the alleged deficiency.

35. All programs, plans or other documents required to be submitted pursuant to this Consent Decree shall become incorporated into and enforceable under this Consent Decree, upon EPA approval. In the event EPA approves a portion of any program, plan or other document pursuant to this Section, the approved portion shall become incorporated into and enforceable under this Consent Decree, subject only to Defendant's right to invoke the Dispute Resolution procedures set forth in Section XII.

IX. CIVIL PENALTY

36. Defendant shall pay a total civil penalty in the amount of \$ 109,000 to the United States for violations as alleged by the United States in the complaint. Defendant shall pay the \$ 109,000 within thirty (30) days of the Date of Entry of this Consent Decree in accordance with the procedures described in Paragraph 38, below.

37. The United States shall be deemed a judgment creditor for purposes of collection of this civil penalty.

38. Payment of the civil penalty to the United States shall be made by Electronic Funds Transfer ("EFT") to the U.S. Department of Justice ("DOJ") lockbox bank, referencing USAO NO 2005V00004. Payment shall be made in accordance with instructions provided by the United States to Defendant following execution of this Consent Decree. Any EFT received at the DOJ lockbox bank after 11:00 A.M. Eastern Time will be credited on the next business day. Notice of the EFT shall simultaneously be mailed to the following:

Docket Clerk (3RC00)
U.S. EPA - Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Russell Swan (3RC10)
U.S. EPA - Region III
MailCode (3RC10)
1650 Arch Street
Philadelphia, PA 19103-2029

39. The transmittal letter forwarding such notice shall include the caption, civil action number and judicial district of this action.

40. If Defendant fails to tender all or any portion of the civil penalty payment owed to the United States within thirty (30) days of the Date of Entry of this Consent Decree, interest on the unpaid amount shall accrue in accordance with the provisions of 28 U.S.C. § 1961 and be paid from the date said payment is due until all amounts owed are paid.

X. STIPULATED PENALTIES

41. Upon written demand by EPA, Defendant shall pay stipulated penalties for each failure to comply with the terms of this Consent Decree, including the terms of any plans or schedules developed pursuant to and incorporated into this Consent Decree, subject only to Defendant's right to invoke the Dispute Resolution procedures set forth in Section XII. The

stipulated penalties shall be assessed as follows and paid as set forth in Paragraphs 49 through 51 and 59 through 60 of this Decree.

42. Stipulated Penalties for Remedial Measures

(a) Following written demand by EPA, and subject only to Defendant's right to invoke the Dispute Resolution procedures set forth in Section XII, Defendant shall pay stipulated penalties in the amount set forth below for each day it fails to meet any of the project milestone dates set forth in Section V. Remedial Measures, Paragraphs 7 through 29 of this Consent Decree.

(i) **Failure to provide Facility restart notification:**

<u>Period of Non-Compliance</u>	<u>Penalty per Milestone Date per day of Violation</u>
0 - 30 days	\$1,250
30 - 60 days	\$2,000
Beyond 60 days	\$3,000

(ii) **Failure to provide notification 15 days prior to testing:**

<u>Period of Non-Compliance</u>	<u>Penalty per Milestone Date per day of Violation</u>
0 - 15 days	\$2,000
Beyond 15 days or until test	\$3,000

(iii) **Failure to conduct validation/initial performance testing and provide testing results within time required by Paragraph 16:**

<u>Period of Non-Compliance</u>	<u>Penalty per Milestone Date per day of Violation</u>
0 - 30 days	\$3,000
30 - 90 days	\$10,000
Beyond 90 days	\$15,000

(iv) Failure to submit Compliance Plan:

<u>Period of Non-Compliance</u>	<u>Penalty per Milestone Date per day of Violation</u>
0 - 30 days	\$3,000
30 - 90 days	\$5,000
Beyond 90 days	\$10,000

(b) Following written demand by EPA, and subject only to Defendant's right to invoke the Dispute Resolution procedures set forth in Section XII, Defendant shall pay stipulated penalties in the amount set forth below for each day it fails to meet the construction completion milestone set forth in Paragraph 28 above.

Failure to complete construction and/or improvement milestones in accordance with approved Compliance Plan Schedule

<u>Period of Non-Compliance</u>	<u>Penalty per Milestone Date per day of Violation</u>
0 - 30 days	\$3,000
30 - 60 days	\$5,000
Beyond 60 days	\$10,000

(c) Compliance Reporting. Following written demand by EPA, and subject only to Defendant's right to invoke the Dispute Resolution procedures set forth in Section XII, Defendant shall pay stipulated penalties in the amount set forth below for each day it fails to submit any progress report or information required to be included within a progress report required to be submitted pursuant to this Consent Decree.

<u>Period of Non-Compliance</u>	<u>Penalty per Element per Day of Violation</u>
1 st to 30 th day	\$5,00
31 st to 60 th day	\$1,000
Beyond 60 days	\$2,000

43. Stipulated civil penalties shall automatically begin to accrue on the first day Defendant fails to satisfy any obligation or requirement of this Consent Decree and shall continue to accrue until the violation or deficiency is corrected or the matter is resolved pursuant to the Dispute Resolution Procedures of Section XII.

44. Following written demand by EPA, and subject only to Defendant's right to invoke the Dispute Resolution procedures set forth in Section XII, stipulated penalties incurred by Defendant under this Consent Decree, shall be paid to the United States in accordance with the procedures set forth in Paragraph 38.

45. Stipulated penalties incurred under this Consent Decree shall be tendered within thirty (30) days of Defendant's receipt of a written demand for payment of such penalties by EPA unless Defendant contests the demand in accordance with the dispute resolution provisions of this Consent Decree. If Defendant invokes the dispute resolution provisions in Section XII of this Consent Decree, it shall deposit any disputed penalty in an interest-bearing escrow account within ten (10) days of invoking dispute resolution. The stipulated penalties that are the subject of the dispute, as well as interest earned thereon, shall be released in a manner consistent with the terms of the resolution of the dispute within sixty (60) days after the dispute is resolved. Stipulated penalties for any continuing violation shall accrue during the resolution of any dispute.

46. Where a single event triggers more than one stipulated penalty provision in this Consent Decree, only the higher of the individual stipulated penalties shall apply. The United States will elect between seeking stipulated penalties under this Decree and commencing a new action for civil penalties under the Clean Air Act where a violation of the Decree is also a violation of the Clean Air Act or its implementing regulations.

47. In the event that a stipulated civil penalty is not paid when due, the stipulated civil penalty owed to the United States shall be payable with interest from the original due date to the date of payment at the statutory judgment rate set forth at 28 U.S.C. § 1961(a).

48. The United States may, in its unreviewable exercise of discretion, reduce or waive

stipulated penalties otherwise due to the United States under this Consent Decree.

XI. FORCE MAJEURE

49. "Force Majeure" for the purposes of this Consent Decree is defined as an event arising from causes beyond the control of Defendant or the control of any entity controlled by Defendant, including its agents, consultants and contractors, which delays or prevents the performance of any obligation under this Consent Decree. Unanticipated or increased costs or expenses associated with implementation of this Consent Decree and changed financial circumstances shall not, in any event, be considered "force majeure" events. In addition, failure to apply for a required permit or approval, or to provide in a timely manner all information required to obtain a permit or approval that is necessary to meet the requirements of this Consent Decree, or failure of Defendant to approve contracts, shall not, in any event, be considered "force majeure" events. Defendant shall adopt all reasonable measures to avoid or minimize such delay.

50. When Defendant knows or if Defendant should have known, by the exercise of due diligence, of an event that might delay completion of any requirement of this Consent Decree, whether or not the event is a "force majeure" event, Defendant shall notify EPA in writing, within twenty (20) business days after Defendant first knew, or in the exercise of reasonable diligence under the circumstances, should have known of such event. The notice shall provide a description of the event and an explanation of the reasons for the delay, the anticipated duration of the delay, all actions taken or to be taken to prevent or mitigate the delay or the effect of the delay, the timetable by which those measures will be implemented, whether Defendant claims that the delay should be excused as a "force majeure" event, and its rationale for attributing such delay to a "force majeure" event if it intends to assert such a claim. Defendant shall include all available documentation supporting its claim that the delay was attributable to a "force majeure" event. Further, where a contractor or subcontractor has not

completed a construction project on time, Defendant shall state what steps it is taking to ensure performance by the contractor or subcontractor in question, and shall supply any documentation available to show the steps it has taken.

51. Failure to provide the required written notice to EPA shall render this Section void and of no effect as to the event in question, and shall be a waiver of Defendant's right to obtain an extension of time for its obligations based on such event.

52. If EPA finds that a delay in performance is, or was, caused by a "force majeure" event, the time for performance of the specific obligation(s) under this Consent Decree that is/are caused by the "force majeure" event shall be extended for a period to compensate for the delay resulting from such event, and stipulated penalties shall not be due for such period. EPA will notify Defendant in writing of the length of the extension for performance of the obligation(s) caused by the "force majeure" event. An extension of time for performance of the obligation(s) caused by the "force majeure" event shall not, of itself, extend the time for performance of any other obligation. Defendant shall make an individual showing of proof regarding the cause of each delayed incremental step or other requirement for which an extension is sought.

53. In the event of a dispute regarding application of these provisions to a delay in performance, the dispute resolution provisions of Section XII (Dispute Resolution) shall apply, and Defendant shall have the burden of proving that the delay is, or was, caused by a "force majeure" event, and that the amount of additional time requested is necessary to compensate for that event. Defendant shall not be liable for stipulated penalties for any period of delay which is excused by the Court or EPA pursuant to this "Force Majeure" Section. However, pending resolution of a "force majeure" dispute, stipulated penalties will continue to accrue until compliance is achieved, and shall be due and payable if the Court determines that the event in question was not a "force majeure" event, that the Defendant did not undertake reasonable measures to limit the effect of the event, or that the "force majeure" event occurred for a shorter period of time than that alleged by Defendant.

XII. DISPUTE RESOLUTION

54. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes between Defendant and EPA arising under or with respect to this Consent Decree. However, the procedures set forth in this Section shall not apply to actions by the United States to enforce obligations of Defendant that have not been disputed in accordance with this Section.

55. Informal Dispute Resolution. Any dispute which arises under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between Defendant and EPA. The period for informal negotiations shall not exceed twenty (20) days from the time Defendant sends EPA a written Notice of Dispute, unless that period is modified by written agreement of Defendant and EPA. The Notice of Dispute shall clearly describe the matter in dispute. In the event the Parties cannot resolve their dispute within the informal negotiation period, then the position advanced by EPA shall be considered binding unless, within 30 days of the conclusion of the informal negotiation period, Defendant invokes the formal dispute resolution procedures as set forth below.

56. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by filing with the Court and serving on EPA a motion requesting judicial resolution of the dispute. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

57. The United States shall respond to Defendant's motion within the time period provided in the Local Rules of this Court including any supporting factual documentation, unless the Parties stipulate otherwise. Defendant may file a reply memorandum, to the extent permitted by the Local Rules or the Parties' stipulation, as applicable.

58. In any dispute under this Paragraph, Defendant shall bear the burden of demonstrating that Defendant's position complies with this Consent Decree and the Clean Air Act. In resolving any dispute between the parties, the position of the United States shall be upheld if supported by substantial evidence.

59. Submission of any matter to the Court for resolution shall not extend any of the deadlines set forth in this Consent Decree unless the Parties agree to such extension in writing, or the Court grants an order extending such deadline. Stipulated penalties with respect to the disputed matter shall continue to accrue but payment shall be stayed pending resolution of the dispute as provided herein. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Consent Decree. In the event that Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section X (Stipulated Penalties) unless the Court rules otherwise.

XIII. EFFECT OF SETTLEMENT

60. Compliance with this Consent Decree, including the payment of all civil and stipulated penalties and interest accrued thereon, and the completion of all injunctive relief, shall resolve the United States' civil claims for violations of the Clean Air Act as alleged in the complaint filed in this matter, through the Date of Entry of this Consent Decree.

XIV. NON-WAIVER PROVISIONS

61. The Parties agree that Defendant is responsible for achieving and maintaining compliance with this Consent Decree, and that compliance shall be no defense to any actions commenced pursuant to federal, state or local laws, regulations, or permits, except as otherwise expressly specified in the Consent Decree.

62. The United States does not, by its consent to the entry of this Consent Decree,

warrant or aver in any manner that Defendant's complete compliance with this Consent Decree will result in compliance with the provisions of the Clean Air Act, 42 U.S.C. §§ 7401 to 7671q and the regulations promulgated thereunder. Notwithstanding EPA's review or approval of any plans, reports, policies, or procedures formulated pursuant to this Consent Decree, Defendant shall remain solely responsible for any non-compliance with the terms of this Consent Decree, the Clean Air Act and regulations promulgated thereunder.

63. The Parties reserve any and all legal and equitable remedies available to enforce the provisions of this Consent Decree.

64. This Consent Decree shall not limit any authority of EPA under the Clean Air Act or any applicable statute, including the authority to seek information from Defendant or to seek access to the property of Defendant.

65. Performance of the terms of this Consent Decree by Defendant is not conditioned on the receipt of any federal, state or local funds. Application for any grants or loans, or delays caused by inadequate facility planning or plans and specifications on the part of Defendant shall not be cause for extension of any required compliance date in this Consent Decree.

66. It is the intent of the Parties hereto that the clauses hereof are severable, and should any clause(s) be declared by a court of competent jurisdiction to be invalid and unenforceable, the remaining clauses shall remain in full force and effect.

67. The United States reserves all remedies available to it for violations of the Clean Air Act by Defendant which are not alleged in the complaint or which occur after the Date of Lodging of this Consent Decree.

68. This Consent Decree does not resolve criminal liability, if any, that any person might have for violations of the Clean Air Act.

69. Nothing in this Consent Decree shall be construed to limit the authority of the United States to undertake any action against any person, including Defendant, in response to conditions that may present an imminent and substantial endangerment to the environment or to

the public health or welfare.

XV. NOT A PERMIT/COMPLIANCE WITH OTHER STATUTES/REGULATIONS

70. This Consent Decree is not and shall not be construed as a permit issued pursuant to Subchapter V of the Clean Air Act, nor as a modification of any existing permit so issued, nor shall it in any way relieve Defendant of its obligations to comply with permits, if any, otherwise required for any portion of its Facility, and with any other applicable federal, state and local law or regulation. This Consent Decree shall not be interpreted to excuse Defendant from any obligation to comply with any new permit, or modification of existing permits, in accordance with applicable federal, state and local laws and regulations.

71. Nothing herein shall be construed as relieving Defendant of the duty to comply with the Clean Air Act and its implementing regulations, and all applicable permits issued under that act and regulations.

XVI. COSTS OF SUIT

72. Each party shall bear its own costs and attorney's fees with respect to matters resolved by this Consent Decree.

XVII. RECORD KEEPING

73. (a) Defendant shall maintain copies of any reports, plans, permits and documents, submitted to EPA pursuant to this Consent Decree, including any underlying research and data, for a period of five (5) years from date of submission. Defendant shall require any independent contractor operating any portion of the Facility or implementing any portion of this Consent Decree to also retain such materials for a period of five (5) years from date of submission. Defendant shall submit such supporting documents to EPA upon request.

(b) In addition to the reports and documentation required to be provided by Defendant under the terms of this Consent Decree, Defendant shall also provide, upon demand, any analytical data or any other documents requested by the United States to review work done,

or to be done, by Defendant or to determine Defendant's compliance with the terms of this Consent Decree, provided, however, that Defendant shall not be obligated to submit any information for which Defendant makes a claim for withholding subject to a specific privilege recognized under the federal rules of this Court.

74. Defendant shall notify EPA thirty (30) days prior to the disposal or destruction of such records at the end of this five year period and shall, upon EPA's request, make such records available to EPA prior to such disposal or destruction.

XVIII. FORM OF NOTICE

75. Unless otherwise specified, all reports, notices, or any other written communications required to be submitted under this Consent Decree shall be sent to the respective Parties at the following addresses:

As to the United States:

Christopher A. Day
Special Assistant United States Attorney
Mail Code 3RC20
United States Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103

As to EPA:

Russell S. Swan
Assistant Regional Counsel (3RC10)
United States Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103

James W. Hagedorn
Air Protection Division (3AP12)
United States Environmental Protection Agency
Region III

1650 Arch Street
Philadelphia, PA 19103

As to Defendant:

Larry Campbell, President
MFS, Inc.
RR5, Box 5151
Easton Road
Bethlehem, PA 18015

Thomas J. Zagami
Hodes, Ulman, Pessin & Katz, P.A.
Suite 650
10500 Little Patuxent Parkway
Columbia, MD 21044

Benjamin G. Stonelake, Jr.
Blank Rome, LLP
One Logan Square
18th & Cherry Streets
Philadelphia, PA 19103

Notifications to or communications with any party hereto shall be deemed submitted on the date they are received.

XIX. MODIFICATION

76. This Consent Decree contains the entire agreement of the Parties and shall not be modified by any prior written agreement, representation or understanding. The Consent Decree may be modified by written consent of all of the Parties or, if the Parties cannot agree, by written Order of this Court. All modifications, with the exception of modifications deemed non-material by mutual agreement of EPA and Defendant, shall be in writing and must be filed with the Court before such modification will be deemed effective.

XX. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

77. This Consent Decree shall be lodged with the Court for a period of thirty (30)

days for public notice and comment, pursuant to the requirements of 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations which indicate that this Consent Decree is inappropriate, improper, or inadequate. Defendant consents to the entry of this Consent Decree without further notice.

78. If for any reason this Court should decline to approve this Consent Decree in the form presented, this agreement is voidable at the sole discretion of any party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

XXI. RETENTION OF JURISDICTION

79. This Court shall retain jurisdiction of this matter for the purposes of implementing and enforcing the terms and conditions of this Consent Decree and for the purpose of adjudicating all disputes among the Parties that may arise under the provisions of this Consent Decree, to the extent that this Consent Decree provides for resolution of disputes by the Court. Such jurisdiction shall not terminate until all requirements of this Consent Decree have been fulfilled and all disputes arising under this Consent Decree have been resolved.

XXII. TERMINATION

80. The Consent Decree shall terminate when all of the following events have occurred:

- (a) Defendant has satisfied its obligations under this Consent Decree;
- (b) Defendant has paid all civil penalties, costs, damages, stipulated penalties, and other sums due under this Consent Decree; and
- (c) the Parties file a Joint Motion to Terminate the Consent Decree with the Court and the Court grants the Motion.

81. The Consent Decree shall not terminate if, following certification by Defendant of compliance pursuant to Paragraph 80(a) above, the United States asserts in writing that full compliance has not been achieved. If the United States disputes Defendant's certification of compliance, this Consent Decree shall remain in effect pending resolution of the dispute by the Parties or the Court in accordance with the Dispute Resolution provisions of this Consent Decree.

XXIII. SIGNATORIES/SERVICE

82. The United States Attorney on behalf of the United States and the undersigned representatives of Defendant certify that they are fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind such party to this document.

83. Defendant agrees to accept service of process by certified mail to the President of MFS, Larry Campbell, and one of Defendant's attorney's, Mr. Thomas Zagami, or any other designee as authorized in writing, with respect to all matters arising under or relating to this Consent Decree, and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXIV. INTEGRATION/APPENDICES

84. This Consent Decree and its Appendix constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supercede all prior agreements and understandings, whether oral or written. Other than the Appendices, which are attached to and incorporated into this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

Dated and entered this _____ day of _____ 2007.

JUDGE LAWRENCE F. STENGEL

FOR THE UNITED STATES OF AMERICA:

PATRICK L. MEEHAN
United States Attorney
Eastern District of Pennsylvania

3/9/07
DATE


VIRGINIA A. GIBSON
Assistant United States Attorney
Chief, Civil Division

3/8/07
DATE

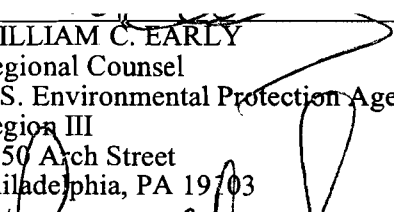
CHRISTOPHER A. DAY
Special Assistant United States Attorney
Mail Code 3RC20
EPA Region III
1650 Arch Street
Philadelphia, PA 19103
(215) 814-2481

March 8, 2007
DATE

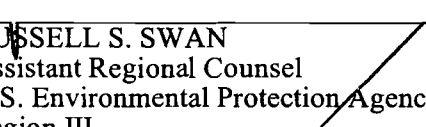
FOR THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

_____
DONALD S. WELSH
Regional Administrator
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103

3/1/07
DATE

_____
WILLIAM C. EARLY
Regional Counsel
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103

2/28/07
DATE

_____
RUSSELL S. SWAN
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103

2/9/07
DATE

FOR DEFENDANT MFS, INC.;

_____
LARRY CAMPBELL, President
MFS, Inc.

2/9/07
DATE

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA)	
)	
Plaintiff,)	
)	Civil Action No. 05-6656
v.)	
)	
MFS, INC. (a/k/a MINERAL)	
FIBER SPECIALISTS))	
)	
Defendant.)	
_____)	

APPENDIX A to Consent Decree

Proposed Alternative MACT Compliance Test Method
MFS, Inc. - Bethlehem, Pennsylvania

**Proposed Alternative MACT Compliance Test Method
MFS, Inc. - Bethlehem, Pennsylvania**

June 15, 2006

Introduction

MFS, Inc. (MFS) is submitting this proposal to the U.S. EPA for an alternative compliance test method to demonstrate compliance with the mineral wool production NESHAP standard at 40 CFR Part 63 subpart DDD at the MFS Bethlehem, Pennsylvania mineral wool manufacturing plant. MFS requests that EPA review and approve this alternative test method pursuant to the NESHAP General Provisions at 40 CFR Part 63 Section 63.7(f). This proposal details the method by which MFS will demonstrate compliance with the Subpart DDD emission limit for existing mineral wool cupolas of 0.10 pound of particulate matter (PM) emissions per ton of melt.

The proposed methodology has been reviewed in draft form with EPA technical representatives from the OAQPS and has received informal approval subject to incorporation of method validation and precision testing elements. This final test method protocol incorporates EPA comments and constitutes a formal submission and request for EPA approval pursuant to 40 CFR Part 63 Section 63.7(f). MFS proposes to incorporate test method validation procedures that are generally consistent with the validation procedures specified in EPA Method 301.

General Test Requirements

This test protocol is for an initial compliance test to be conducted on two (2) existing cupola furnace exhausts at the MFS mineral wool production plant in Bethlehem, Pennsylvania. MFS owns and operates these cupolas to manufacture mineral wool. This test protocol would determine whether the emissions from these cupolas can meet the federal Maximum Achievable Control Technology (MACT) standard, specified at 40 CFR, Part 63, subpart DDD for Mineral Wool Production.

The MFS cupola exhausts are treated in a single fabric filter dust collector before being vented to atmosphere. Sections 63.1188 and 63.1189 of the subpart DDD MACT standard provide the requirements for performance testing, but EPA stated in the Federal Register preamble to the final rule that it would consider alternative test methods for mineral wool plants like the MFS Bethlehem plant with different dust collection/fabric filter configurations from the plants that formed the basis for the MACT PM emissions standard.

A performance test is required to demonstrate initial compliance with the PM emission limits for the cupola exhaust. Environmental Protection Agency (EPA) Method 5 is specified to determine PM concentrations. The performance test must consist of three test runs. The final rule specifies a minimum performance test run time of three hours and a minimum run sample volume of 135 dscf. The amount of raw materials, excluding coke, charged into and melted in each cupola during each performance test run must be measured and recorded. From these three test runs, an arithmetic average hourly melt rate will be calculated and used in the compliance determination.

PM emission limits for the cupolas serve as a surrogate for metal HAPS. MFS proposes to use EPA Method 5 to determine the filterable PM emissions from the fabric filter exhaust points during the test. Compliance with the MACT Standard will be determined by comparing the average filterable PM emissions during three test runs to the MACT standard of 0.10 lbs/ton of melt. As required by the standard, the average melt rate during the three runs will be used to calculate the test average emission rate. In addition, EPA Methods 1, 2, 3/3A and 4 will also be used during the test. A summary of the proposed EPA test methods is provided in Table 1.

Because the fabric filter dust collector serves mineral wool fiber handling operations as well as the cupola furnaces, MFS proposes to use electron microscopy and material density measurements to determine the relative contribution of PM emissions from the cupolas and the other fiber handling operations. MFS requests EPA approval for the use of this methodology to determine the relative contribution from the cupola furnaces to the fabric filter exhaust PM emissions.

Table 1 – Proposed EPA Test Methods

Parameter	Method
Gas velocity and volumetric flow rate	EPA 1, 2
Gas composition (CO ₂ and O ₂ concentrations)	EPA 3/3A
Moisture content	EPA 4
Particulate concentrations and mass rates	EPA 5 (filterable only)

Sampling and Analysis Approach

For cupola exhausts with fabric filter controls, the MACT standard requires that the initial compliance testing for the cupolas be conducted at a location after the fabric filter. At the MFS facility, the exhausts from the two cupolas are commingled with the exhausts from other fiber handling operations before entering the fabric filter. For the MFS facility, a direct measurement of PM emissions after the fabric filter would represent the combined PM emissions from the cupolas and other process exhausts and would not directly provide the cupola contribution to PM emissions.

An additional testing complication is introduced by the fabric filter exhaust configuration. The fabric filter consists of six (6) separate compartments and has six individual exhaust stacks. The dust collector is designed to operate, at any one time, with five (5) of the six (6) compartments treating process exhaust and one compartment either idle or cleaning. The normal cleaning cycle will be operated during the course of the three (3) hour tests and all six exhausts will be tested while the collector is in normal operation.

A schematic diagram of the operations that are treated by the fabric filter is provided in Figure 1. Each of the two (2) mineral wool systems has one (1) cupola and two (2) fiber handling cyclones exhausting to the fabric filter. The fabric filter has six exhaust stacks. In Figure 1, points 1 through 6 represent each outlet stack from the fabric filter. Point 7 represents the #1 primary

cyclone exhaust before the fabric filter and point 8 represents the #1 primary cupola exhaust before the fabric filter.

MFS proposes to test the total PM emissions from the fabric filter by performing one (1) three-hour Method 5 test at each of the fabric filter's six (6) exhaust stacks. Three test runs are proposed with simultaneous testing of two of the six stacks during each test run, for a total of six Method 5 tests. This proposed testing approach is consistent with the provisions of EPA Method 5D, Section 8.2.3 – Multiple Measurement Sites, which applies to baghouses employing multiple stacks.

If the total filterable PM emissions measured in the outlet stacks from the cupolas and cyclones is less than the 0.10 lbs/ton of melt, then the relative PM contributions from the cupolas and cyclones is not required to demonstrate compliance. However, if the total filterable PM from the fabric filter exhausts does exceed the MACT limit then MFS proposes to use electron microscopy to determine the relative contribution of PM emissions from the cupolas and from the other fiber handling operations.

Material deposition in inlet ductwork from the cupolas and cyclones indicates that the particle characteristics such as color, shape and size distribution for cupola PM versus fiber handling cyclone PM are visually different. PM from the cupolas may be physically characterized as charred and ash-like in appearance, whereas, the PM from the cyclones is expected to be glassy and fibrous. The physical differences in the collected PM from the cupolas and cyclones is expected to be evident when collected on a sampling filter and viewed under an electron microscope.

MFS proposes to perform the EPA Method 5 sampling and to use paired PM sampling trains suitable for electron microscopy analysis in accordance with the outline provided in Table 2. Note that the filters used for examining samples with a microscope are constructed of polycarbonate and are different than the filters used for conducting the EPA Method 5 testing. The paired PM sampling trains with polycarbonate filters will collect PM from one of the fabric filter exhausts prior to or after each of the Method 5 test runs. A total of three (3) fabric filter exhausts will be sampled using paired sample trains. The period of time that the paired sample trains are operated will depend on field conditions and visual observation of the filters.

MFS will determine the relative contribution of controlled PM emissions from the cupolas with the following procedures:

- A. Total PM mass emissions from fabric filter** – The mass emission rate of total filterable PM exhausted from the fabric filter will be measured using EPA Method 5. Two of the six filter stacks will be sampled simultaneously during each of three (3) test runs so that after three runs, one (1) Method 5 sample will be collected for each of the fabric filter's six stacks. Each of the Method 5 tests will be three (3) hours in duration. Mass emissions from the two (2) cupolas will be determined by summing the total PM mass emissions from the six (6) stacks and applying the proportional mass fraction of cupola ash. Details regarding the calculation of the fraction of cupola ash in the samples are discussed in the following section B.

- B. Cupola ash mass fraction determination and electron microscopy method precision determination** - The mass fraction of cupola ash in the filter exhaust will be determined by assessing the volume fraction of cupola ash versus fiber materials on the polycarbonate filters using visual assessment with electron microscopy. The volume fraction of cupola ash will be calculated using the average of the volume fractions estimated from at least three (3) paired samples (6 total samples). The average volume fraction of the cupola ash and fiber material will be converted to mass fractions by multiplying the average volumes by ash density and fiber density, respectively (see section D below).

The precision of this method for determining the mass fraction of cupola ash with polycarbonate filters and electron microscopy will be based on the difference in mass fraction estimated in the paired trains and will be quantified using the precision and F-test calculations provided in EPA Test Method 301 sections 6.2.1.1 through 6.2.1.3. If the F-test indicates that the alternative method precision is less than the Method 5 precision, a correction factor will be used to adjust the ash fraction. This correction factor will be calculated by dividing the difference in the mass for each of the pairs over the average mass of each pair to determine a difference percentage for each pair. The correction factor will be the average of these three values. This factor will be accepted as the uncertainty of the electron microscopy method and will be added to the measured ash percent.

- C. PM characterization standards for cupola versus fiber and bias determination for the electron microscopy method** - MFS proposes to collect PM material, before fabric filter treatment, from the #1 cupola exhaust and the #1 primary cyclone on filters designed for examination under an electron microscope. The locations for samples taken for the electron microscope are indicated as points 7 and 8 in Figure 1. Each of these samples will be used to characterize the physical appearance of PM emissions from the operations from which they were collected. Material color, shape and surface appearance will be characterized for the cupola ash PM and the fiber PM.

MFS also proposes to evaluate the bias of the electron microscopy method for determining mass fractions of cupola ash and fiber by performing both gravimetric analyses and microscopy testing on the cupola and fiber handling exhaust filters and evaluating the difference in estimated mass emissions using the two methods. PM material will be collected from the cupola #1 and primary cyclone #1 exhausts (before the fabric filter) on polycarbonate sampling filters. Gravimetric analyses will be performed on the filters by weighing the filters before and after sampling to determine collected PM mass. Microscopy analyses will also be performed on the samples and, with the material bulk density (see next section D), the collected PM mass will be determined. Three samples will be taken on each of the two exhaust streams. Bias will be analyzed using EPA Method 301 section 6.2.1.4. If the bias is statistically significant, a correction factor will be used to adjust the mass determined through electron microscopy. These corrections will be based on the statistical approach provided in EPA Method 301 section 6.2.1.5.

D. Cupola PM and fiber handling PM density determination – A grab sample of bulk material will be collected from the cupola #1 and the primary exhaust #1 ductwork to determine PM material density for each of the two exhaust streams.

Production Conditions

Testing will be conducted with both cupolas operating at normal maximum melt rates. Melt rates for the two cupolas will be added and a combined melt rate computed for each of the test runs. An average of the three combined melt rates will be computed for the test and used in assessing compliance with the MACT PM standard of 0.10 lbs/ton melt.

Figure 1 – Ductwork Schematic and Test Point Designations

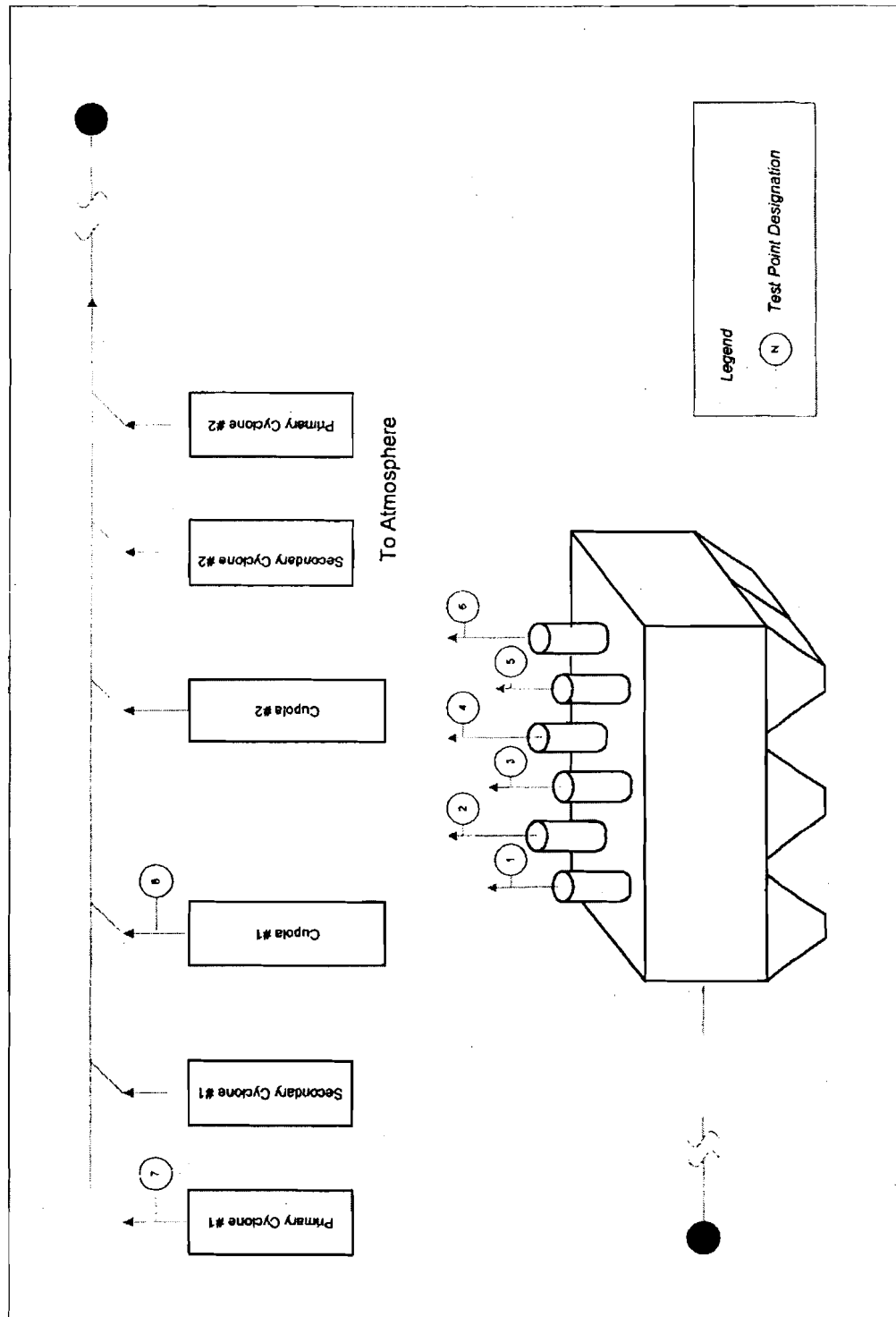


Table 2 – Proposed Testing Approach

Test Method	(Approach Ref) Purpose	Run	Duration	Test Location							
				1	2	3	4	5	6	7	8
EPA Method 5	(A) Total PM mass emissions from fabric filter	Run 1	3 hours	1	1						
Electron Microscope Paired Train	(B) Total PM mass emissions from fabric filter	Run 1	1 hour*			2					
EPA Method 5	(A) Total PM mass emissions from fabric filter	Run 2	3 hours			1	1				
Electron Microscope Paired Train	(B) Total PM mass emissions from fabric filter	Run 2	1 hour*					2			
EPA Method 5	(A) Total PM mass emissions from fabric filter	Run 3	3 hours					1	1		
Electron Microscope Paired Train	(B) Total PM mass emissions from fabric filter	Run 3	1 hour*	2							
Electron Microscope	(C) PM characterization standards for cupola versus other fiber handling operations and validation of microscopy approach for mass determination	Run 4	15 min*							1	1
Electron Microscope	(C) PM characterization standards for cupola versus other fiber handling operations and validation of microscopy approach for mass determination	Run 5	15 min*							1	1
Electron Microscope	(C) PM characterization standards for cupola versus other fiber handling operations and validation of microscopy approach for mass determination	Run 6	15 min*							1	1
Grab sample	(D) Density determination	N/A	N/A							1	1

*These are estimated times. Preliminary sampling may be conducted to determine appropriate run times to optimize the amount of material collected.